

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF
CONSTRUCTION PERMIT
TELEVISION STATION KFDM-DT
BEAUMONT, TEXAS

September 25, 2002

CHANNEL 21 50 KW (MAX-DA) 254 M

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Technical Statement

This Technical Exhibit was prepared on behalf of digital television broadcast station KFDM-DT, Beaumont, Texas, in support of an application for modification of construction permit.* KFDM-DT is paired with analog NTSC TV station KFDM-TV, Channel 6. KFDM-DT was allotted Channel 21, with a maximum effective radiated power (ERP) of 1000 kW, as its transitional DTV allotment channel using the licensed KFDM-TV transmitter site. The KFDM-DT construction permit specifies operation on Channel 21 with a maximum ERP of 50 kW and an antenna height above average terrain of 254 m using an “omnioid” type directional antenna pattern. The instant application proposes operation of KFDM-DT as authorized in its construction permit, but using a “cardioid” type directional antenna pattern instead of the “omnioid” originally proposed. There are no other changes proposed. The maximum ERP and antenna height as authorized will not change. The proposal meets the FCC’s DTV application “checklist” filing requirements.[†]

* See FCC File No. BPCDT-19991006AAM.

[†] See FCC *Public Notice*, “Commission Details Application Filing Procedures Digital Television (DTV)”, Released: October 16, 1997; and, FCC *Public Notice*, “Additional Application Processing Guidelines for Digital Television (DTV)”, Released: August 10, 1998.

Proposed Facilities

The proposed transmitting antenna will be side-mounted on the existing KFDM-TV transmission tower with a center of radiation at 250 m above ground level (256 m AMSL). The proposed facility will operate on Channel 21 with a maximum directional average ERP of 50 kW and an antenna radiation center HAAT of 254 m.

The proposal meets the maximum permissible ERP requirements pursuant to Section 73.622(f) of the FCC Rules. Figure 3 is a relative field polar graph of the KFDM-DT allotment pattern. The minimum at any point on the pattern is 0.990 relative field, which equates to an ERP 980 kW for a maximum power of 1000 kW. Therefore, it is evident that the proposed KFDM-DT facility will not exceed the FCC DTV allotment facility for KFDM-DT along any bearing.

Tower Registration

The KFDM-DT antenna structure has been registered with the FCC. The FCC antenna structure registration number is 1040514. There will be no change in the overall height of the antenna structure as a result of the instant proposal.

Predicted Coverage Contours

The predicted f(50,90) coverage contours for the proposed facility were calculated in accordance with the FCC Rules. The 3-16 km terrain data were obtained through use of the N.G.D.C. 30-second computer database.

The proposed facility provides minimum 48 dBu, f(50,90), coverage of Beaumont in compliance with Section 73.625(a)(1) of the FCC Rules, as adopted by the FCC in MM Docket No. 00-39. Figure 1 is a tabulation of the calculated distances to the

predicted coverage contours. Figure 2 herein is a map depicting the predicted coverage contours of the proposed facility.

Allocation Considerations

Since the proposed KFDM-DT facility will be less than the KFDM-DT FCC allotment facility the allocation criteria for KFDM-DT are presumed met with respect to all pertinent analog TV and digital TV allotments and assignments.

Environmental Considerations

With respect to the potential for human exposure to radio frequency (RF) radiation, calculations prepared in accordance with FCC Bulletin OET-65 (Edition 97-01) indicate that the proposal will not result in human exposure to RF radiation at ground level in excess of FCC standards. Power density calculations were conducted at 2-m above ground[‡] based on the following conservative assumptions, with the following results:

Call Sign	Channel	Peak Visual ERP or Average ERP (kW)	Aural ERP (kW)	Relative Field Factor [§]	FCC Limit** (mW/cm ²)	Percentage of Limit
KFDM-DT	21	50	--	0.35	0.343	0.97%

As indicated above, the exposure to RF radiation at 2-m above ground level will not exceed 0.97% of the FCC limit for general population / uncontrolled exposure. Therefore, the proposal complies with the FCC limits for human exposure to RF radiation and it is categorically excluded from environmental processing. The applicant, in coordination with other users of the transmission facility, shall reduce power or cease

[‡] The radiation center height above ground is 250 m.

[§] This is a conservative estimate of the relative field factor in the downward direction.

^{**} for general population/uncontrolled environments

operation as necessary to protect persons having access to the KFDM-DT tower or antenna from radio frequency radiation in excess of the FCC guidelines.

Louis Robert du Treil, Jr.

September 25, 2002

Figure 1

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Tabulation of Average Elevations and
Distances to Predicted Coverage Contours

Azimuth (deg.T)	3-16 km Average Terrain (m)	Antenna HAAT (m)	ERP (kW)	48 dBu f(50,90) Contour (km)	41 dBu f(50,90) Contour (km)
0	6	250	44.4	61.8	70.1
45	6	250	42.5	61.6	69.9
90	0	256	15.7	56.8	65.1
135	0	256	2.9	48.0	56.4
180	0	256	15.7	56.8	65.1
225	2	254	42.5	61.8	70.1
270	1	255	44.4	62.1	70.4
315	4	252	50.0	62.5	70.8

Note: The 3-16-km average terrain is 2 m based on the eight conventional radials (0° , 45° , 90° , etc.). The N.G.D.C. linearly interpolated 30-second terrain database was employed in determining the average terrain elevations. The overall antenna radiation center height above average terrain is 254 m based on the eight conventional radials.

Figure 2

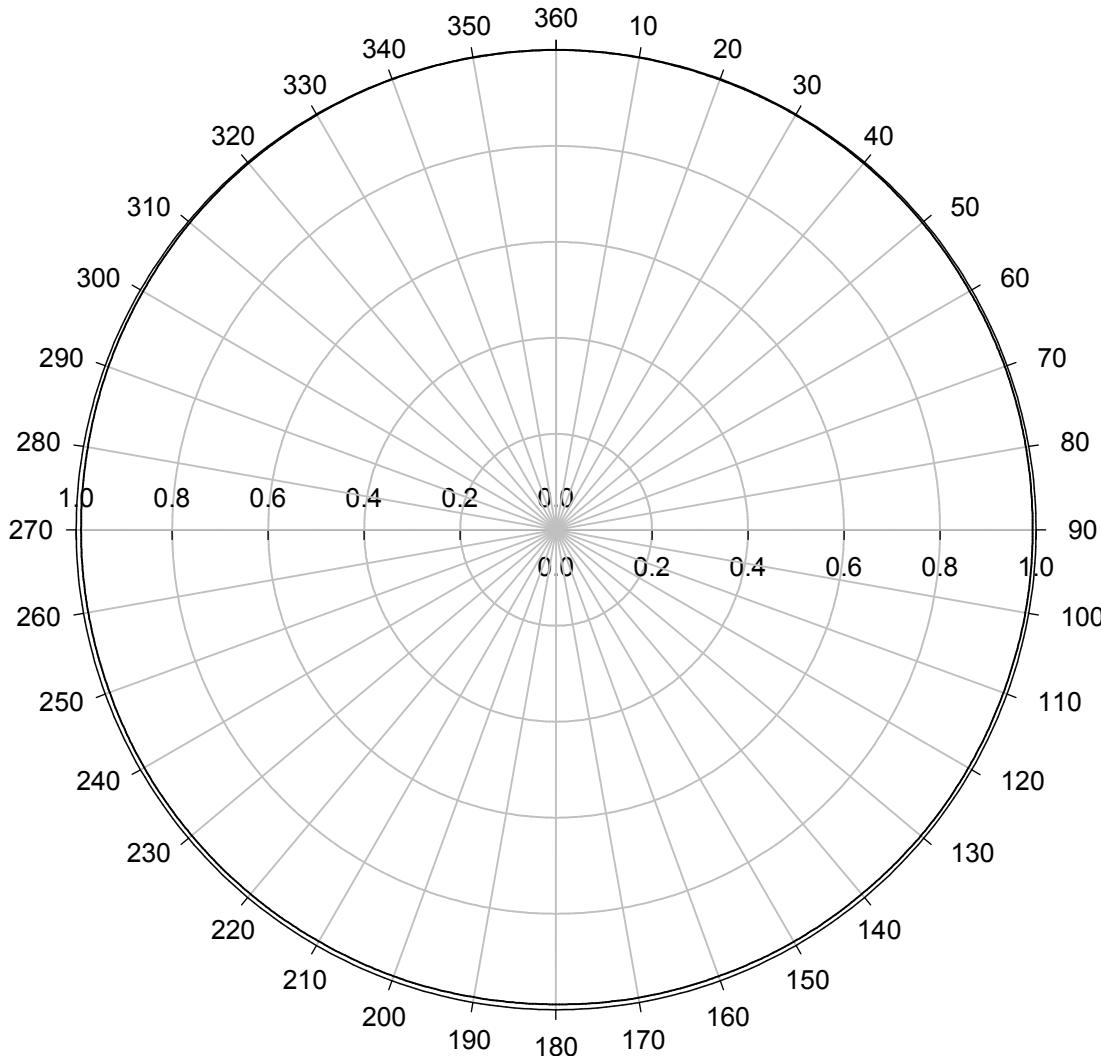


PREDICTED COVERAGE CONTOURS

TELEVISION STATION KFDM-DT
BEAUMONT, TEXAS
CHANNEL 21 50 KW (MAX-DA) 254 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 3



FCC DTV ALLOTMENT PATTERN ENVELOPE FOR KFDM-DT (GRAPH - RELATIVE FIELD)

TELEVISION STATION KFDM-DT
BEAUMONT, TEXAS
CHANNEL 21 50 KW (MAX-DA) 254 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

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Transmitting Antenna Manufacturer's
Azimuthal Plane and Vertical Plane Pattern Data

(four pages follow)

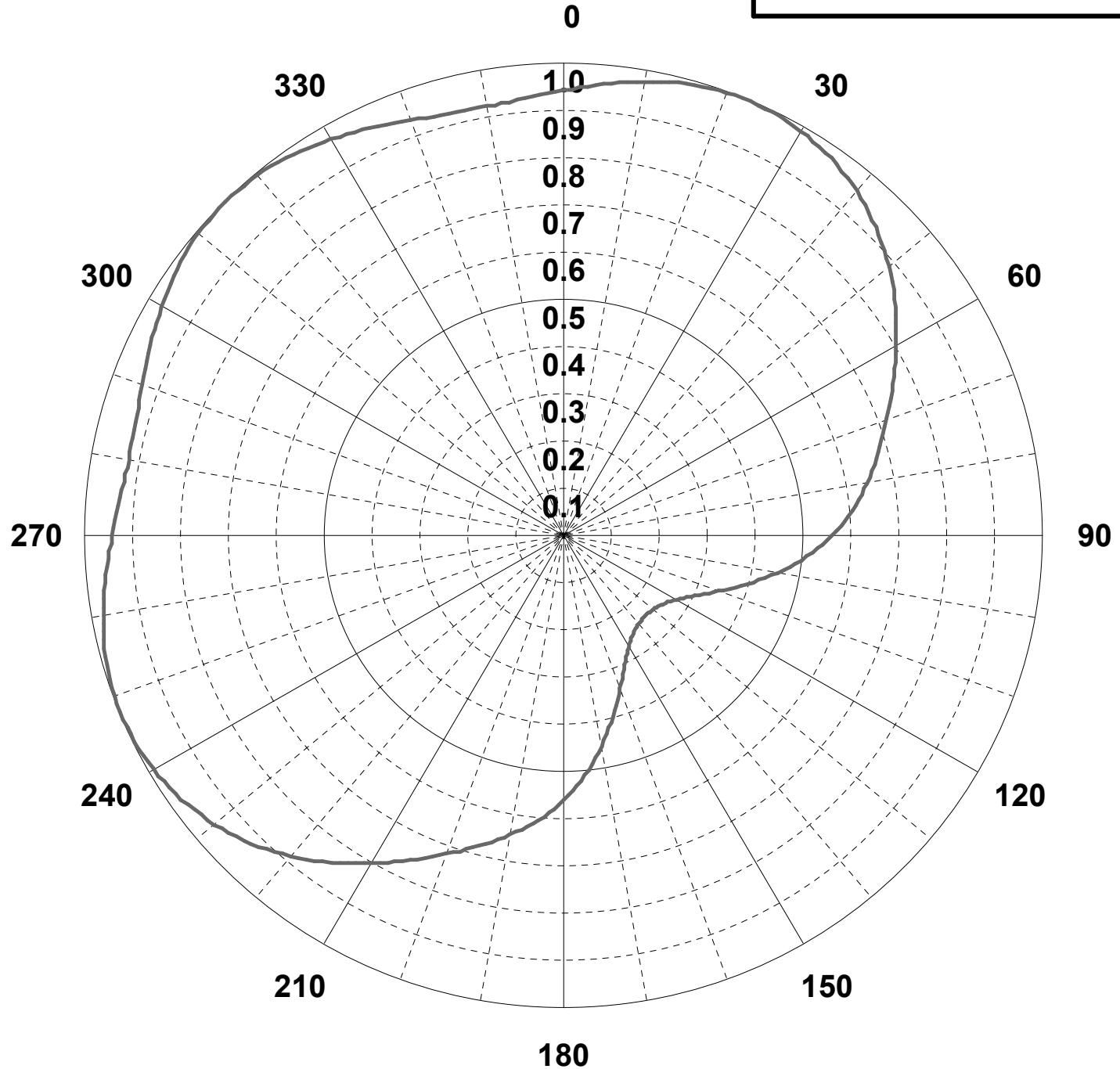


Channel: 21

Type: ALP-W

Gain: 1.56 (1.93 dB)

Polarization: Horizontal

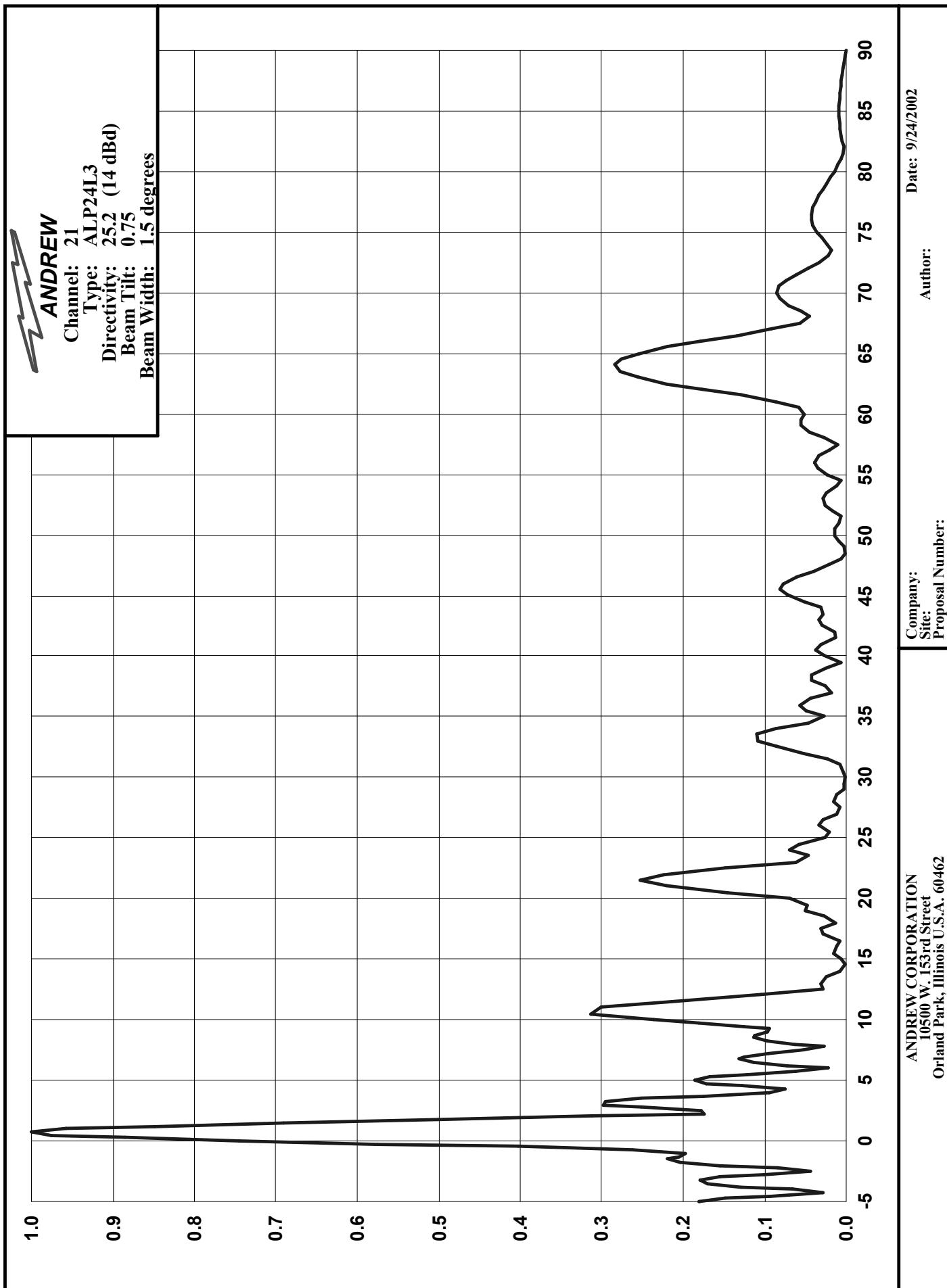


ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A. 60462

Company:
Site:
Proposal Number:

Date: 9/24/2002

Author:





Angle	Amp	dB									
-5.00	0.180	-14.89	9.00	0.097	-20.26	36.00	0.057	-24.88	63.50	0.277	-11.15
-4.75	0.149	-16.54	9.25	0.094	-20.54	36.50	0.044	-27.13	64.00	0.284	-10.93
-4.50	0.093	-20.63	9.50	0.125	-18.06	37.00	0.018	-34.89	64.50	0.276	-11.18
-4.25	0.029	-30.75	9.75	0.180	-14.89	37.50	0.026	-31.70	65.00	0.254	-11.90
-4.00	0.066	-23.61	10.00	0.236	-12.54	38.00	0.043	-27.33	65.50	0.220	-13.15
-3.75	0.129	-17.79	10.50	0.314	-10.06	38.50	0.042	-27.54	66.00	0.179	-14.94
-3.50	0.170	-15.39	11.00	0.301	-10.43	39.00	0.024	-32.40	66.50	0.134	-17.46
-3.25	0.179	-14.94	11.50	0.214	-13.39	39.50	0.006	-44.44	67.00	0.091	-20.82
-3.00	0.155	-16.19	12.00	0.104	-19.66	40.00	0.027	-31.37	67.50	0.057	-24.88
-2.75	0.101	-19.91	12.50	0.029	-30.75	40.50	0.037	-28.64	68.00	0.045	-26.94
-2.50	0.044	-27.13	13.00	0.031	-30.17	41.00	0.031	-30.17	68.50	0.056	-25.04
-2.25	0.084	-21.51	13.50	0.025	-32.04	41.50	0.013	-37.72	69.00	0.071	-22.97
-2.00	0.155	-16.19	14.00	0.008	-41.94	42.00	0.014	-37.08	69.50	0.081	-21.83
-1.75	0.204	-13.81	14.50	0.001	-60.00	42.50	0.030	-30.46	70.00	0.085	-21.41
-1.50	0.220	-13.15	15.00	0.007	-43.10	43.00	0.034	-29.37	70.50	0.082	-21.72
-1.25	0.205	-13.76	15.50	0.015	-36.48	43.50	0.028	-31.06	71.00	0.074	-22.62
-1.00	0.197	-14.11	16.00	0.011	-39.17	44.00	0.031	-30.17	71.50	0.062	-24.15
-0.75	0.262	-11.63	16.50	0.008	-41.94	44.50	0.052	-25.68	72.00	0.047	-26.56
-0.50	0.402	-7.92	17.00	0.028	-31.06	45.00	0.072	-22.85	72.50	0.033	-29.63
-0.25	0.575	-4.81	17.50	0.031	-30.17	45.50	0.081	-21.83	73.00	0.022	-33.15
0.00	0.745	-2.56	18.00	0.013	-37.72	46.00	0.077	-22.27	73.50	0.018	-34.89
0.25	0.885	-1.06	18.50	0.027	-31.37	46.50	0.061	-24.29	74.00	0.023	-32.77
0.50	0.975	-0.22	19.00	0.050	-26.02	47.00	0.040	-27.96	74.50	0.030	-30.46
0.75	1.000	0.00	19.50	0.048	-26.38	47.50	0.020	-33.98	75.00	0.036	-28.87
1.00	0.957	-0.38	20.00	0.070	-23.10	48.00	0.006	-44.44	75.50	0.041	-27.74
1.25	0.849	-1.42	20.50	0.146	-16.71	48.50	0.001	-60.00	76.00	0.043	-27.33
1.50	0.690	-3.22	21.00	0.221	-13.11	49.00	0.003	-50.46	76.50	0.043	-27.33
1.75	0.501	-6.00	21.50	0.253	-11.94	49.50	0.009	-40.92	77.00	0.041	-27.74
2.00	0.312	-10.12	22.00	0.225	-12.96	50.00	0.014	-37.08	77.50	0.038	-28.40
2.25	0.174	-15.19	22.50	0.149	-16.54	50.50	0.014	-37.08	78.00	0.034	-29.37
2.50	0.178	-14.99	23.00	0.062	-24.15	51.00	0.009	-40.92	78.50	0.029	-30.75
2.75	0.252	-11.97	23.50	0.046	-26.74	51.50	0.007	-43.10	79.00	0.024	-32.40
3.00	0.298	-10.52	24.00	0.070	-23.10	52.00	0.017	-35.39	79.50	0.019	-34.42
3.25	0.296	-10.57	24.50	0.058	-24.73	52.50	0.026	-31.70	80.00	0.014	-37.08
3.50	0.251	-12.01	25.00	0.026	-31.70	53.00	0.028	-31.06	80.50	0.010	-40.00
3.75	0.175	-15.14	25.50	0.020	-33.98	53.50	0.024	-32.40	81.00	0.006	-44.44
4.00	0.094	-20.54	26.00	0.034	-29.37	54.00	0.012	-38.42	81.50	0.004	-47.96
4.25	0.075	-22.50	26.50	0.029	-30.75	54.50	0.007	-43.10	82.00	0.003	-50.46
4.50	0.128	-17.86	27.00	0.011	-39.17	55.00	0.023	-32.77	82.50	0.005	-46.02
4.75	0.172	-15.29	27.50	0.008	-41.94	55.50	0.035	-29.12	83.00	0.006	-44.44
5.00	0.186	-14.61	28.00	0.015	-36.48	56.00	0.039	-28.18	83.50	0.008	-41.94
5.25	0.168	-15.49	28.50	0.011	-39.17	56.50	0.034	-29.37	84.00	0.008	-41.94
5.50	0.123	-18.20	29.00	0.003	-50.46	57.00	0.020	-33.98	84.50	0.009	-40.92
5.75	0.062	-24.15	29.50	0.002	-53.98	57.50	0.010	-40.00	85.00	0.009	-40.92
6.00	0.022	-33.15	30.00	0.001	-60.00	58.00	0.027	-31.37	85.50	0.009	-40.92
6.25	0.072	-22.85	30.50	0.004	-47.96	58.50	0.045	-26.94	86.00	0.008	-41.94
6.50	0.114	-18.86	31.00	0.008	-41.94	59.00	0.055	-25.19	86.50	0.008	-41.94
6.75	0.132	-17.59	31.50	0.023	-32.77	59.50	0.056	-25.04	87.00	0.007	-43.10
7.00	0.125	-18.06	32.00	0.052	-25.68	60.00	0.052	-25.68	87.50	0.006	-44.44
7.25	0.096	-20.35	32.50	0.085	-21.41	60.50	0.058	-24.73	88.00	0.005	-46.02
7.50	0.053	-25.51	33.00	0.108	-19.33	61.00	0.086	-21.31	88.50	0.004	-47.96
7.75	0.027	-31.37	33.50	0.110	-19.17	61.50	0.129	-17.79	89.00	0.002	-53.98
8.00	0.063	-24.01	34.00	0.087	-21.21	62.00	0.177	-15.04	89.50	0.001	-60.00
8.25	0.097	-20.26	34.50	0.047	-26.56	62.50	0.221	-13.11	90.00	0.000	---
8.50	0.114	-18.86	35.00	0.027	-31.37	63.00	0.255	-11.87			
8.75	0.112	-19.02	35.50	0.049	-26.20	63.50	0.277	-11.15			

ANDREW CORPORATION
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